

SUPPORT FOR THE AMENDMENTS

This Amendment amends Claim 2. Support for the amendments is found in the specification and claims as originally filed. In particular, support for Claim 2 is found in Figs. 3-4 and in the specification at least at page 2, line 30 ("outside environment") and page 6, lines 3-5 ("a pressure of the detected substance 11 ... is directly transmitted to the semiconductor device 5"). No new matter would be introduced by entry of these amendments.

Upon entry of these amendments, Claims 1-7 will be pending in this application. Claims 1 and 2 are independent.

REQUEST FOR RECONSIDERATION

Applicants respectfully request entry of the foregoing and reexamination and reconsideration of the application, as amended, in light of the remarks that follow.

Applicants thank the Examiner for the indication that Claims 1, 3 and 6 are allowed over the prior art of record. Office Action at page 2, section 4.

Applicants thank the Examiner for the courtesies extended to their representative during the personal interview on March 21, 2006.

As discussed at the personal interview, the present invention provides a pressure sensor including a semiconductor device capable of detecting pressure; a bonding wire; a terminal that is connected to the semiconductor device by the bonding wire; and a housing having an accommodation space accommodating the semiconductor device, the bonding wire and the terminal, where the terminal and the housing are sealed by a fluorine-based adhesive. In a second embodiment no working fluid is provided.

Some conventional pressure sensors include a fluorine-based gel as a working fluid and a fluorine-based adhesive. Specification at page 1, lines 12-22; page 2, lines 3-12.

However, fluorine-based gels are expensive as working fluids. It would be desirable to replace these expensive working fluids with low cost working fluids, such as silicone-based oils. However, a silicone based-oil will cause a silicone-based adhesive to swell and will degrade the seal between the terminal and the housing. Specification at page 2, lines 20-27.

The present invention overcomes the high-cost and durability problems of conventional pressure sensors by using no working fluid; and by using a fluorine-based adhesive between the terminal and the housing. In embodiments where no working fluid is used, particularly low manufacturing costs can be achieved. Specification at page 6, lines 12-13. As a result, the present invention provides a pressure sensor having high sensitivity and durability at a low manufacturing cost. Specification at page 3, lines 1-4; page 5, lines 3-10.

Claims 2, 4 and 5 are rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 6,512,255 ("Aoki").

Aoki discloses a semiconductor pressure sensor device has a semiconductor sensor chip 2 mounted on a resin package 1 with which insert pins 4 are insert molded. The sensor chip 2 and the pins 4 are electrically connected to each other by bonding wires 6. An electrically insulating protective member 7 covers the chip 2, the pins 4 and the wires 6. Aoki at abstract; column 4, lines 17-20; Fig 1.

However, Aoki fails to suggest the independent Claim 2 limitation of a pressure sensor including "a semiconductor device capable of detecting pressure and in *direct* contact with the environment outside of the sensor".

Thus, the prior art rejection should be withdraw.

The title is objected to as assertedly not being descriptive. To obviate the objection, the title is replaced with a new title.

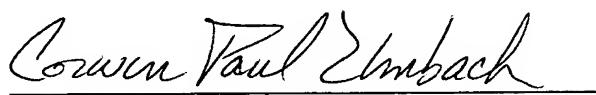
Pursuant to M.P.E.P. § 821.04, after independent product Claim 2 is allowed, Applicants respectfully request examination and allowance of method Claim 7, which include all of the limitations of product Claim 2.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance. Applicants respectfully request favorable consideration and prompt allowance of the application.

Should the Examiner believe that anything further is necessary in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.
Norman F. Oblon


Corwin P. Umbach
Corwin P. Umbach, Ph.D.
Registration No. 40,211

NFO/CPU